Amendments to the Claims:

Please amend the claims as follows:

Claims 1-16 (cancelled).

17. (New) A method for conducting a lateral flow immunoassay involving quantitative detection of target analytes in a sample, the method comprising:

applying the sample to one end of the porous membrane of a lateral flow assay device, the membrane having a capture region;

coupling superparamagnetic conjugated particles residing in the test strip at said one end of the membrane, the superparamagnetic conjugated particles being treated to bind with any target analyte in the sample to form bound complexes;

capturing the bound complexes of analyte and superparamagnetic particles in the capture region of the porous membrane as the sample and bound complexes move through the porous membrane by capillary action;

reading the quantity of labeled analytes in the capture region; and

providing an output representative of the quantity of labeled analytes in the capture region.

18. (New) The method recited in claim 17, and further comprising removing the test strip from the lateral flow assay device with the bound complexes remaining available to be selectively stored and sensed as to the quantity of the bound complexes in the capture region.

19. (New) A method for conducting a lateral flow immunoassay quantitative detection of target analytes in a sample, the method comprising:

coupling superparamagnetic conjugate particles with target analyte in the sample, the superparamagnetic conjugate particles comprising:

superparamagnetic particles; and

an antigen specific for the target analyte;

isolating the target analyte magnetically;

applying the sample to one end of the porous membrane of a lateral flow assay device, the membrane having a capture region;

capturing the bound complexes of analyte and superparamagnetic conjugate particles in the capture region of the porous membrane as the sample and bound complexes move through the porous membrane by capillary action;

reading the quantity of labeled analytes in the capture region; and

providing an output representative of the quantity of labeled analytes in the capture region.

20. (New) The method recited in claim 19, and further comprising removing the test strip from the lateral flow assay device with the bound complexes remaining available to be selectively stored and sensed as to the quantity of the bound complexes in the capture region.

21. (New) A lateral flow assay device for quantitative detection of target analytes in a sample, said device comprising:

an assay support member having a first end and a second end;

a sample receiving element at one end of said support member for introduction of the sample to be analyzed into said device;

superparamagnetic particles in said sample receiving element, said particles being isolated magnetically before introduction into the sample receiving element, and said particles being configured to bind with target analytes in the sample; and

an immunoassay test strip comprising:

a porous analytical membrane removably mounted adjacent to and generally parallel with said support member, said analytical membrane having a first end and a second end;

at least one capture region in said analytical membrane intermediate said first and second ends thereof, said at least one capture region being configured to capture a labeled analyte moving from said first end of said analytical membrane toward said second end of said analytical membrane;

a backing member between said analytical membrane and said support member to facilitate removal of said analytical membrane from said support member for reading the assay and for archiving said test strip;

a protective membrane covering said analytical membrane on the side opposite to said support member, said protective membrane being optically non-transparent; and

at least one magnetic standard line printed on said protective membrane.

22. (New) The device recited in claim 21, wherein said protective membrane is formed integrally with said porous membrane.

23. (New) The device recited in claim 21, wherein said protective membrane is formed pursuant to a surface treatment of said porous membrane.

24. (New) The device recited in claim 21, and further comprising a control region in said porous membrane for collection of magnetic conjugates that have passed through the capture region to indicate that said test strip has been used.

25. (New) The device recited in claim 21, wherein said protective membrane is formed of material selected from the group consisting of plastic, glass and paper.

26. (New) A lateral flow assay device for quantitative detection of target analytes in a sample, said device comprising:

an assay support member having a first end and a second end;

superparamagnetic particles, said particles being isolated magnetically before introduction into the device, and said particles being configured to bind with target analytes in the sample; and

an immunoassay test strip comprising:

a porous analytical membrane removably mounted adjacent to and generally parallel with said support member, said analytical membrane having a first end and a second end;

at least one capture region in said analytical membrane intermediate said first and second ends thereof, said at least one capture region being configured to capture a labeled

analyte moving from said first end of said analytical membrane toward said second end of said analytical membrane;

a backing member between said analytical membrane and said support member to facilitate removal of said analytical membrane from said support member for reading the assay and for archiving said test strip;

a protective membrane covering said analytical membrane on the side opposite to said support member, said protective membrane being optically non-transparent; and

at least one magnetic standard line printed on said protective membrane.

27. (New) The device recited in claim 26, wherein said protective membrane is formed integrally with said porous membrane.

28. (New) The device recited in claim 26, wherein said protective membrane is formed pursuant to a surface treatment of said porous membrane.

29. (New) The device recited in claim 26, and further comprising a control region in said porous membrane for collection of magnetic conjugates that have passed through the capture region to indicate that said test strip has been used.

30. (New) The device recited in claim 26, wherein said protective membrane is formed of material selected from the group consisting of plastic, glass and paper.

31. (New) A lateral flow assay device for quantitative detection of target analytes in a sample, said device comprising:

an assay support member having a first end and a second end;

superparamagnetic particles configured to bind with target analytes in the sample; and

an immunoassay test strip comprising:

a porous analytical membrane removably mounted adjacent to and generally parallel with said support member, said analytical membrane having a first end and a second end;

at least one capture region in said analytical membrane intermediate said first and second ends thereof, said at least one capture region being configured to capture a labeled analyte moving from said first end of said analytical membrane toward said second end of said analytical membrane;

a backing member between said analytical membrane and said support member to facilitate removal of said analytical membrane from said support member for reading the assay and for archiving said test strip;

a protective membrane covering said analytical membrane on the side opposite to said support member, said protective membrane being optically non-transparent; and

at least one magnetic standard line printed on said protective membrane.

32. (New) The device recited in claim 31, wherein said protective membrane is formed integrally with said porous membrane.

33. (New) The device recited in claim 31, wherein said protective membrane is formed pursuant to a surface treatment of said porous membrane.

34. (New) The device recited in claim 31, and further comprising a control region in said porous membrane for collection of magnetic conjugates that have passed through the capture region to indicate that said test strip has been used.

35. (New) The device recited in claim 31, wherein said protective membrane is formed of material selected from the group consisting of plastic, glass and paper.